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ABSTRACT

Early, accurate identification of potentially at-risk students is crucial to developing effective dropout prevention programs. Checklists are commonly used by schools and agencies to identify potential dropouts. Unfortunately checklists have several weaknesses, e.g., it is difficult to know how many characteristics must be checked before deciding a student is at risk. Despite their shortcomings, checklists can be helpful as initial screening devices. An identification system is more than just an instrument, it is a process. Suggested processes to help a school district develop its own system include: data collection process; data analysis process; and data utilization process. Although variables related to dropping out include those from several sources, such as the family and community, ones for which schools can collect data, and to which they can respond include: attendance, grade point average, number of grade retentions and discipline referrals, educational level of parents, special program placements, free/reduced lunch program, number of school transfers, reading and math scores, and language spoken in home. With caution and continuous modification and refinement, school districts can use variables from extant checklists, the research literature and local surveys as the basis for developing their own identification systems, especially computer-generated predictive formulas. By using a more systematic approach, school administrators can be more confident in student assignment to programs, and practitioners can be more effective in designing relevant strategies for target students. (LLL)

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How To Identify At-Risk Students

By
Shirley Wells, Sue Bechard and John V. Hamby

PURPOSE

The purpose of this report is to describe a research- and practice-based process to aid local school districts in developing a system for identifying potential dropouts. Such a process is needed because:

1. *One of the most significant findings to emerge from research on dropouts is that early identification is vital to effective prevention and intervention.*

2. *A common set of characteristics compiled from research on dropouts nationwide can serve as a blueprint for identifying dropouts in any locale. However, because of subtle variations from area to area, a locally developed identification system will be much more precise and effective if it includes only those characteristics specific to the local population of students.*

3. *The earlier a problem is identified and addressed, the greater the impact on at-risk students.*

4. *Students drop out of school for many different reasons. The structure and content of dropout prevention programs must match clearly identified personal characteristics and environmental conditions that place students at risk.*

5. *Program developers must use accurate, objective identification procedures to properly assign students to treatment activities and to apply limited resources efficiently and effectively.*

TWO APPROACHES TO IDENTIFYING POTENTIAL DROPOUTS

Checklists are commonly used by schools and agencies to identify potential dropouts (Wells, 1987). Characteristics related to dropping out are gathered from research literature, dropout exit interviews, student records and other sources. These characteristics are arrayed on a checklist form which can be completed by teachers, counselors or other staff for identifying students who may be at risk of leaving school (California Department of Education, 1986;

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Los Angeles County Office of Education, 1986; Los Angeles Unified School District, 1985; Oakland County Schools, Michigan, 1985; North Carolina Department of Public Instruction, 1985; Florida Department of Education, 1986; Wisconsin Department of Public Instruction, 1986; Ohio Department of Public Instruction, n.d.; Pasternak, 1986).

Unfortunately, checklists have several weaknesses. First, it is difficult to know how many characteristics must be checked before deciding if a student is at risk. Second, this gross approach to identification often leads to students being misclassified at risk and placed in prevention programs although they probably would not have dropped out had nothing been done for them. Third, educators frequently borrow instruments designed for use with students in program locales very different from their own, limiting generalization of characteristics on the checklist.

Despite their shortcomings, checklists can be helpful as initial screening devices. Also, they contain items which can be used as factors in developing a more objective identification approach, such as a statistically-generated prediction formula (Brown, 1988; Obrzut, Nelson and Cummings, 1987; Berquist and Kruppenbach, 1987; Kortering et al., 1989; Kentucky Department of Education, 1981).

The purpose of a predictive formula is to find the best set of factors to distinguish between students who will drop out and those who will graduate. Two important benefits of this approach are:

- It allows the school or district to identify those variables most relevant to that particular student population.
- It provides a more precise, accurate method for selecting students for prevention programs.

DEVELOPING AN IDENTIFICATION SYSTEM

An identification system is more than just an instrument; it is a process. The following processes are suggested to help a school district develop its own system and are illustrated by the chart found on page 5.

Data Collection Process

1. Develop a checklist of variables that fits the local at-risk student population by reviewing forms from other districts and lists from literature sources (**shorter version; see Student Identification Process on page 5**). Teachers and other school personnel can use this short checklist for initial screening of students.

2. Develop a more comprehensive questionnaire for use in generating a prediction formula by supplementing variables on the short checklist with others identified at the local level using school records and locally-developed surveys and questionnaires. If uncertainty exists regarding applicability of a variable to the local population, it is best to include it in the initial analysis (see list of suggested variables).

3. Select two groups of students in the local district: (1) those who are dropping out and/or who have already dropped out of school, and (2) a similar group who are graduating and/or have already graduated.

4. Administer the questionnaire—as an exit interview for dropouts, by mail, through interviews, by phone—and collect other data from student records.

5. Collect attitude data from students and perceptions about students (based on other identified variables) from teachers, counselors and administrators.

Data Analysis Process

1. Using data collected from all sources, perform discriminant analysis, step-wise regression analysis and correlations to develop a prediction model (formula) which can be used on similar students to determine their

probabilities of dropping out of school. Help is available from local college and university staffs to districts without the expertise and computer capabilities to perform these analyses.

2. Once predictive formulas are developed, they can be applied to information collected on the current population of students.

Data Utilization Process

1. When potential dropouts are identified, provide schools with computerized profiles so teachers, counselors and administrators can "red flag" these students for special interventions.

2. Design intervention strategies based upon variables having significant predictive validity to the local population of students.

3. Continue to revise and refine prediction formulas on the basis of feedback data collected each year.

4. Longitudinal studies can be conducted by aggregating the data collected from the lower grades through high school and by determining which variables at these grades are the best predictors of dropping out later.

SUGGESTED VARIABLES

Although variables related to dropping out include those from several sources, such as the family and community, ones presented here are those for which schools can collect data and to which they can respond. They are the most common variables found in research that distinguish dropouts from non-dropouts or persisters (Bechard, 1988). Not all variables have the same degree of predictive power, but all have been used in attempts to develop predictive statistical models. They are offered here as a guide to help school districts develop screening instruments and prediction formulas. A local district may find additional variables to be important predictors. Variables are listed in no particular order of priority.

- *Attendance*
- *Grade point average*
- *Standardized test composite scores*
- *Number of grade retentions*
- *Number of discipline referrals*
- *Educational level of parents*
- *Special program placements*
- *Free/reduced lunch program*
- *Number of school moves (transfers)*
- *Reading and math scores*
- *Ethnic/gender distinctions*
- *Language spoken in home*
- *Number of suspensions*
- *Interest in school*
- *Participation in extracurricular activities*
- *Pregnancy/teen parent*
- *Number of counseling referrals*
- *Family status (broken home, single parent family, family size)*

SUGGESTIONS AND CAUTIONS

The following observations from research can provide guidance to local school districts in developing identification systems. These ideas were taken from *Operation Rescue* (National Foundation for the Improvement of

Education, 1986) and *Dropout Prevention* (Florida Department of Education, 1986).

1. A team approach involving teachers, parents, administrators, counselors and students should be used in developing referral systems for at-risk pupils.

2. Total school or grade level populations should be surveyed when identifying at-risk students.

3. Objective, accurate data should be used as the basis of subjective judgments that are sometimes necessary.

4. Data should be gathered from student records as well as teacher observations, student attitudinal surveys, school reports, parent questionnaires or other methods for collecting relevant information.

5. In addition to recent information about dropouts, relevant historical data including elementary and middle school student records should be used when possible, allowing for development of an early identification system in elementary and middle grades. An ongoing monitoring system should include an annual review, possibly each summer, of students who are identified as potential dropouts.

6. Dropout-related variables should be studied in combinations and not as single factors when making decisions about at-risk students. The more variables available, the better able practitioners will be to develop more targeted interventions.

7. When variables are analyzed in statistical models, they should be weighted for their significance to the local student population to obtain the most powerful effect in identification.

8. An identification system, no matter how accurate, is not an end to itself. It should serve the purpose of aiding educators in developing relevant, effective prevention and intervention strategies.

9. Because human behavior is very hard to predict, no statistical formula will identify potential dropouts with one hundred percent accuracy. *A prediction based on sets of identified characteristics is a probability, not a certainty.*

10. Developers of an identification system should reflect on the longitudinal use of instruments in order to confirm their accuracy and usefulness over time.

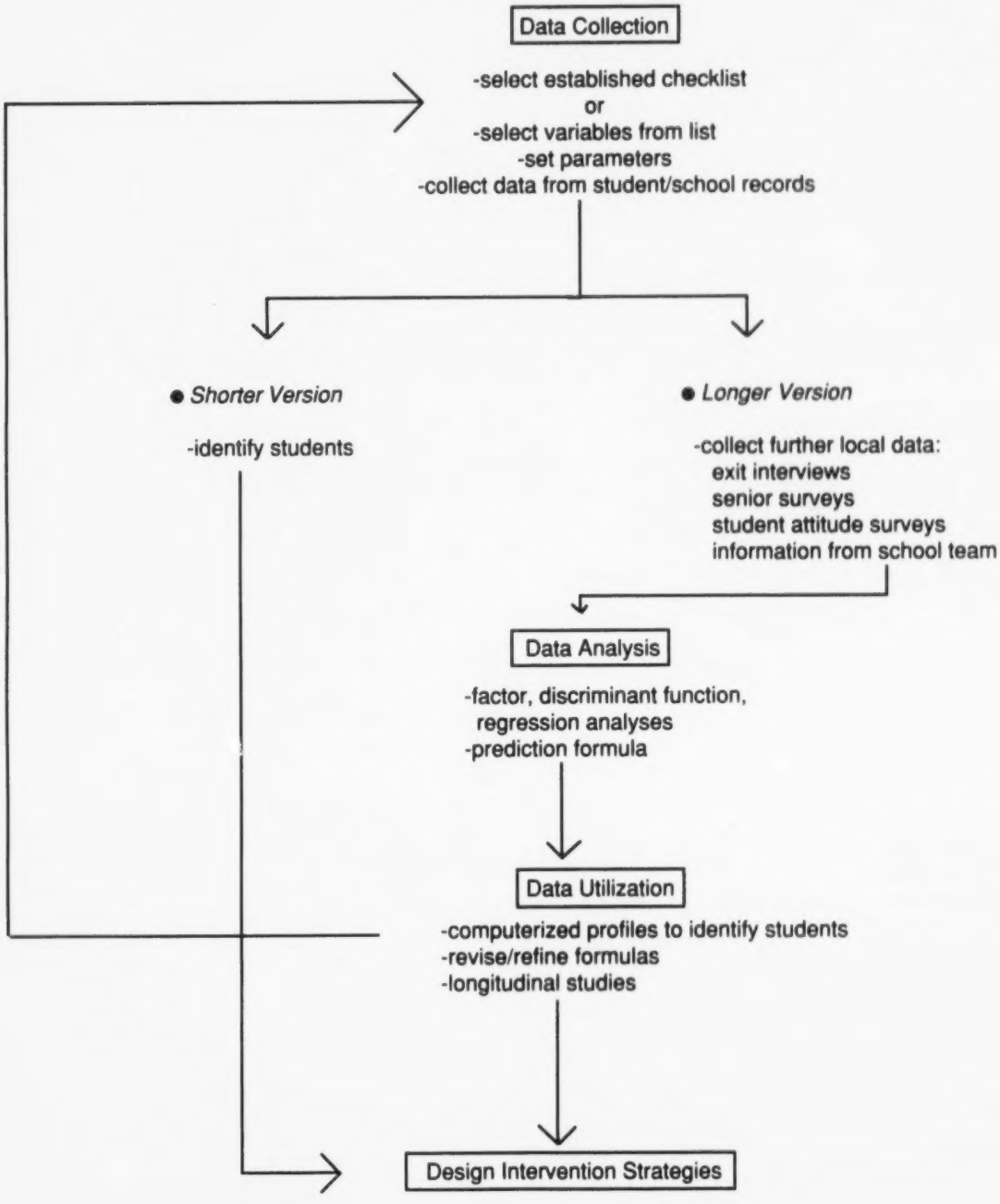
11. When students are identified at early grade levels as being potentially at-risk, labeling should be avoided which might lead to a self-fulfilling prophecy.

12. To be effective, intervention and prevention strategies should always derive from the identified characteristics of the population.

CONCLUSION

Early, accurate identification of potentially at-risk students is crucial to developing effective, efficient dropout prevention programs. With caution and continuous modification and refinement, school districts can use variables from extant checklists, the research literature and local surveys as the basis for developing their own identification systems—especially computer-generated predictive formulas. By using a more systematic approach, school administrators can be more confident in student assignment to programs, and practitioners can be more effective in designing relevant strategies for target students.

STUDENT IDENTIFICATION PROCESS



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The National Dropout Prevention Center is a partnership between an organization of concerned leaders—representing business, educational and policy interests—and Clemson University, created to significantly reduce America's dropout rate by fostering public-private partnerships in local school districts and communities throughout the nation. The Center cultivates these partnerships by collecting, analyzing and disseminating information about technical assistance to develop and demonstrate dropout prevention programs.